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00:00:02.980 --> 00:00:10.140
<v SPEAKER_1>On today's episode, which we recorded January 26th, 2026, I'm talking to Mike Greenley, the CEO of MDA Space.

00:00:10.140 --> 00:00:25.320
<v SPEAKER_1>We talked about the next bound of space exploration, the emerging space economy, Canada's defence space needs, and the opportunity to leverage Canadian defence industry in a space context as part of the government's evolving approach to the industrial base in Canada.

00:00:25.320 --> 00:00:26.960
<v SPEAKER_1>Mike, welcome to Defence Deconstructed.

00:00:26.960 --> 00:00:27.540
<v SPEAKER_2>Thanks for having me.

00:00:28.760 --> 00:00:30.240
<v SPEAKER_1>Can you start this conversation off?

00:00:30.240 --> 00:00:33.920
<v SPEAKER_1>I'm going to dip into a bunch of different things that you folks at MDA Space do.

00:00:33.920 --> 00:00:38.540
<v SPEAKER_1>We could just situate for listeners, like what is that broadly speaking that the company is involved in now?

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<v SPEAKER_2>Sure.

00:00:38.880 --> 00:00:40.740
<v SPEAKER_2>So MDA Space is Canada's space company.

00:00:40.740 --> 00:00:42.680
<v SPEAKER_2>We're the largest space company in Canada.

00:00:42.680 --> 00:00:45.400
<v SPEAKER_2>We've been around for over 55 years now.

00:00:45.400 --> 00:00:47.860
<v SPEAKER_2>These days, we're focused in three business areas.

00:00:47.860 --> 00:00:50.380
<v SPEAKER_2>One is Earth and space observation.

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<v SPEAKER_2>So in that business area, we own and operate RadarSat-2.

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<v SPEAKER_2>Later this year, we'll launch Corus, our next generation Earth observation satellites.

00:00:59.540 --> 00:01:02.360
<v SPEAKER_2>We also build and operate space observation satellites.

00:01:02.360 --> 00:01:08.820
<v SPEAKER_2>So we're looking down at the Earth with RadarSat-2 and delivering imagery to Defence and Intelligence customers, mainly worldwide.

00:01:08.820 --> 00:01:19.040
<v SPEAKER_2>And then we are looking out into space with the operations of Canada's space observation satellites for the Department of National Defence to be able to look at where are all the satellites and what are they doing.

00:01:19.040 --> 00:01:25.280
<v SPEAKER_2>Then we have a business around robotics and space operations centred around the history of the Canadarm in Canada.

00:01:25.280 --> 00:01:27.180
<v SPEAKER_2>We built the Canadarm for the space shuttle.

00:01:27.180 --> 00:01:29.100
<v SPEAKER_2>It flew over 100 missions there.

00:01:29.100 --> 00:01:36.140
<v SPEAKER_2>Then we built Canadarm 2 for the International Space Station, which has been operating now for just over 25 years with five years to go.

00:01:36.140 --> 00:01:44.820
<v SPEAKER_2>And we're building Canadarm 3 now, which is going to be the robotic system for Gateway, the new space station that's going to orbit the moon, which is our current big project.

00:01:44.820 --> 00:01:53.580
<v SPEAKER_2>From that technology base, we've come up with MDA Skymaker, which is our commercial line of space robotics that we sell to commercial customers around the world.

00:01:53.580 --> 00:01:58.180
<v SPEAKER_2>And that team also works on rovers and rover technology for the moon and Mars.

00:01:58.180 --> 00:02:00.820
<v SPEAKER_2>Our third area is communication satellites.

00:02:00.820 --> 00:02:06.240
<v SPEAKER_2>We build satellite components and subsystems that we sell to satellite manufacturers around the world.

00:02:06.240 --> 00:02:16.120
<v SPEAKER_2>But more importantly, these days we've launched MDA Aurora, our new digital satellite, which is the world leading commercial digital satellite for communications constellations.

00:02:16.680 --> 00:02:17.980
<v SPEAKER_2>It's in two forms.

00:02:17.980 --> 00:02:23.060
<v SPEAKER_2>One is for broadband communications to bring internet like data services around the world.

00:02:23.060 --> 00:02:27.100
<v SPEAKER_2>And the other is direct to device to be able to talk directly to cell phones.

00:02:27.100 --> 00:02:36.200
<v SPEAKER_2>So for example, our largest customer there is Global Star and their customer Apple, to be able to deliver the satellites and capability to talk to the iPhones around the world.

00:02:36.200 --> 00:02:39.440
<v SPEAKER_2>That business area is growing tremendously as we go forward.

00:02:40.000 --> 00:02:43.800
<v SPEAKER_2>Space-based communication is a key enabler to communications around the earth.

00:02:44.380 --> 00:02:47.660
<v SPEAKER_2>Those are the three big drivers of our business these days.

00:02:47.660 --> 00:02:54.360
<v SPEAKER_1>Imagine that all of these kind of intersect and come in together, providing some opportunities to share lessons, perspective.

00:02:54.660 --> 00:03:01.720
<v SPEAKER_1>Maybe we could start on the exploration side, just because there are some key milestones coming up with a new round of exploration.

00:03:01.720 --> 00:03:06.680
<v SPEAKER_1>Maybe to situate for listeners, where is the international exploration agenda?

00:03:06.680 --> 00:03:10.180
<v SPEAKER_1>You talked about some of the opportunities that you folks are involved in.

00:03:10.180 --> 00:03:16.900
<v SPEAKER_1>How does that situate with Canadians and people around the world that are attentive to this, are going to see unfold in terms of the next phase of exploration?

00:03:16.900 --> 00:03:17.460
<v SPEAKER_2>Yeah.

00:03:17.460 --> 00:03:19.160
<v SPEAKER_2>It's kind of interesting to talk about actually.

00:03:19.160 --> 00:03:22.660
<v SPEAKER_2>And one of the interesting dynamics in all of this is, you know, what are governments doing?

00:03:22.660 --> 00:03:23.900
<v SPEAKER_2>And then what are corporations doing?

00:03:23.900 --> 00:03:26.120
<v SPEAKER_2>What's the commercial sector doing?

00:03:26.120 --> 00:03:36.120
<v SPEAKER_2>In the space sector, it's always been a government driven activity for 50 years, when the government wanted to observe the earth or have communications or explore space, the government was the driver.

00:03:36.120 --> 00:03:43.380
<v SPEAKER_2>And then in areas where industry has taken over and it's become more commercial, liking communications, that's when you get all your growth.

00:03:43.380 --> 00:03:46.040
<v SPEAKER_2>Now it's become a commercial activity and goes boom.

00:03:46.040 --> 00:03:48.860
<v SPEAKER_2>And so in space exploration, it's starting to live that transition now.

00:03:48.860 --> 00:03:50.100
<v SPEAKER_2>It's pretty interesting.

00:03:50.100 --> 00:03:54.120
<v SPEAKER_2>So a number of years ago, we went to the moon, fine, we proved we could do it.

00:03:54.120 --> 00:04:02.320
<v SPEAKER_2>But for the last 25 years, we've mainly been in and around the International Space Station in low earth orbit and doing all of that activity.

00:04:02.320 --> 00:04:09.420
<v SPEAKER_2>And that's been driven by NASA and Canada and Europe and Japan and a bit of Russia working together on the International Space Station.

00:04:09.420 --> 00:04:10.140
<v SPEAKER_2>Now there's a shift.

00:04:10.540 --> 00:04:15.200
<v SPEAKER_2>The space station is in its last five years and it will go out of service in 2030.

00:04:15.200 --> 00:04:19.880
<v SPEAKER_2>And the government agencies are now focusing on the moon and moon to Mars.

00:04:19.880 --> 00:04:22.560
<v SPEAKER_2>You'll see that phrase, moon to Mars all over the place.

00:04:22.560 --> 00:04:32.280
<v SPEAKER_2>And so the government space agencies are focusing on that next bound of space exploration to go and live and work on the moon and then go and live and work on Mars.

00:04:32.280 --> 00:04:38.340
<v SPEAKER_2>And meanwhile, in the wake of that, industry is now moving into low earth orbit.

00:04:38.820 --> 00:04:45.200
<v SPEAKER_2>So we now have four commercial space stations under development that will compete for space agency work around the world.

00:04:45.200 --> 00:04:48.960
<v SPEAKER_2>We'll see which ones, you know, accelerate there.

00:04:48.960 --> 00:04:56.300
<v SPEAKER_2>And a number of corporations of all different industry types looking about how to live and work in that low earth orbit domain.

00:04:56.300 --> 00:05:00.920
<v SPEAKER_2>Meanwhile, the governments are now looking at the moon as the next priority.

00:05:00.920 --> 00:05:14.060
<v SPEAKER_2>And so the Artemis Accords, which are two-way bilateral agreements between nations and the United States, there's now well over 50 countries that have signed the Artemis Accords to work together to go and live and work on the moon.

00:05:14.060 --> 00:05:18.640
<v SPEAKER_2>China has assembled over a dozen countries to work with them to live and work on the moon.

00:05:18.640 --> 00:05:37.700
<v SPEAKER_2>So there's a little bit of a space exploration, space race there going on about, you know, who's going to go where and get set up on the moon with habitats and, you know, different types of exploration, mining activities, these types of things over the next decade while people get ready to then move on towards Mars.

00:05:37.700 --> 00:05:41.760
<v SPEAKER_2>And so that's what's pushing all the boundaries at the moment.

00:05:41.760 --> 00:05:50.500
<v SPEAKER_1>So as you're reflecting on that, are there particular technological developments that are going to be required for the next round of the Canadarm involvement?

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<v SPEAKER_1>Are there particular aspects of this bound of exploration that you're anticipating are going to drive certain kinds of innovation or opportunities for companies like yours?

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<v SPEAKER_2>Yeah, the technology itself, Liam, we're in a fortunate situation that we've had technology on rovers on Mars for over 15 years.

00:06:09.120 --> 00:06:14.840
<v SPEAKER_2>We've had all of our technologies for space robotics through the entire shuttle program and then the whole space station area.

00:06:14.840 --> 00:06:18.720
<v SPEAKER_2>So that's like 40 years of being the world leader in space-based robotics.

00:06:18.720 --> 00:06:21.100
<v SPEAKER_2>So we've got that really strong technology base.

00:06:21.100 --> 00:06:23.120
<v SPEAKER_2>But then where you go next does affect that.

00:06:23.120 --> 00:06:25.880
<v SPEAKER_2>So, you know, the moon is a different environment.

00:06:25.880 --> 00:06:28.760
<v SPEAKER_2>And so it affects a number of aspects of the hardware.

00:06:29.500 --> 00:06:30.920
<v SPEAKER_2>It's much further away.

00:06:30.920 --> 00:06:38.440
<v SPEAKER_2>We go from the International Space Station 400 km from Earth to, you know, Gateway 400,000 km from Earth.

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<v SPEAKER_2>So the communication lags and your ability to maintain communications is different.

00:06:43.100 --> 00:06:48.680
<v SPEAKER_2>Which means that you need the frameworks in your robotic systems for more autonomy.

00:06:48.680 --> 00:06:59.960
<v SPEAKER_2>Frameworks to be able to grow artificial intelligence over time to be able to make robotic systems smarter and more independent because you can't talk to them and monitor them from Earth every day.

00:06:59.960 --> 00:07:10.780
<v SPEAKER_2>Which is excellent because a lot of the future market opportunity expansions in space will involve robotics and autonomy and so these programs are excellent for advancing that technology base.

00:07:10.780 --> 00:07:12.460
<v SPEAKER_2>And then the same thing applies to the rovers.

00:07:12.460 --> 00:07:21.200
<v SPEAKER_2>You know, rovers to be able to run the robotic systems on them but also to give rovers autonomy and navigation and the ability to operate robotically from a distance.

00:07:22.260 --> 00:07:33.220
<v SPEAKER_1>And you mentioned that there's a different element to this because there's a bunch of maybe it's not exploration but commercial activity that's going kind of in correlation with this next bound.

00:07:33.220 --> 00:08:01.380
<v SPEAKER_1>Given that as you were talking about that the structure and the composition of public and private assets is evolving on that

what would maybe be the more conventional government-led rounds of exploration, what's the kind of nuance does it add that you're part of a mix that doesn't just see NASA putting up NASA rockets to get up there but NASA leading other government agencies involved but also commercial support directly to the state-led activities in conjunction with all the other commercial activities.

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<v SPEAKER_1>Is that, are there particular opportunities there that set up a framework to have some of the work bleed over faster or kind of cross pollinate between the commercial and the government-led applications?

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<v SPEAKER_2>Yeah, definitely, definitely you see an increase in speed.

00:08:15.180 --> 00:08:16.800
<v SPEAKER_2>So the evolution of the market.

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<v SPEAKER_2>So one of the big elements of the space market in terms of why it's advancing and growing so fast is the change in launch capacity over the last decade.

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<v SPEAKER_2>SpaceX has been a big player of that but so have others.

00:08:28.340 --> 00:08:42.040
<v SPEAKER_2>And so that commercial activity and that sort of fail fast, get it done commercial attitude, I got to create a business here type of mentality, not I've got to wait for the government program to finish mentality, which is a different pace.

00:08:42.040 --> 00:08:51.360
<v SPEAKER_2>And so that's really caused us to now have like really a large expansion in launch capacity around the world, for example.

00:08:51.580 --> 00:08:53.660
<v SPEAKER_2>With that launch capacity, it gets cheaper.

00:08:53.660 --> 00:08:59.920
<v SPEAKER_2>So if you want to have a business in orbit commercially, then you can go do it now.

00:08:59.920 --> 00:09:11.440
<v SPEAKER_2>So it used to be if you wanted to go into space, if you wind back 10, 15 years and then 30 years before that, I would go to work with my government, I would partner, I would get on a government mission, and something would happen.

00:09:11.440 --> 00:09:17.220
<v SPEAKER_2>Now you can go to SpaceX and say, I want to launch into space, can I buy a ride on a rocket?

00:09:17.220 --> 00:09:18.640
<v SPEAKER_2>You still need government permission.

00:09:18.640 --> 00:09:26.120
<v SPEAKER_2>In any country that launches, you need government permission to launch, just like you need permission to take off with an aircraft, through air traffic control.

00:09:26.120 --> 00:09:29.820
<v SPEAKER_2>So you need to do that, but otherwise you can do that commercially.

00:09:29.820 --> 00:09:39.980
<v SPEAKER_2>And so for people to say, I'm going to launch some satellites into space and have a business that observes the earth, or a business that does communication, those are traditional examples.

00:09:39.980 --> 00:09:44.260
<v SPEAKER_2>But now we have people saying, I want to launch into space and have a data center.

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<v SPEAKER_2>I want to have a string of satellites with high processing capacity that's going to have power from solar energy instead of competing for all this power plant electricity demand on earth.

00:09:54.140 --> 00:10:00.500
<v SPEAKER_2>I'm going to build a network of data centers in space running on solar energy and run my data center in orbit.

00:10:00.500 --> 00:10:03.080
<v SPEAKER_2>And that's going to be a great business for me.

00:10:03.080 --> 00:10:07.360
<v SPEAKER_2>I work with companies that want to have backup data centers on the moon.

00:10:08.660 --> 00:10:10.600
<v SPEAKER_2>People say, why do you want backup data centers on the moon?

00:10:10.600 --> 00:10:20.640
<v SPEAKER_2>It's like, it's going to be a great business because you have backup data center and so you need to have secure storage that's

not susceptible to earthquakes or floods or terrorist attacks or anything.

00:10:20.640 --> 00:10:23.060
<v SPEAKER_2>So, like, the moon is a really good place, it's kind of lonely.

00:10:23.060 --> 00:10:34.020
<v SPEAKER_2>And so as long as you can have a small modular reactor beside your data center on the moon to have it powered properly and good relay satellites for communication, it's the ultimate backup data center location.

00:10:34.420 --> 00:10:39.220
<v SPEAKER_2>And so some people have built a business around this as a new wild example of things people come up with.

00:10:39.600 --> 00:10:41.380
<v SPEAKER_2>So businesses are looking to do this.

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<v SPEAKER_2>And so as a result, the proliferation of low earth orbit and the amount of commercial activity and now the proliferation of activity on the moon.

00:10:50.520 --> 00:10:55.660
<v SPEAKER_2>We've had, what, three commercial landing attempts on the moon in the last three years.

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<v SPEAKER_2>These are like, you know, corporations.

00:10:57.240 --> 00:11:01.800
<v SPEAKER_2>They might have picked up a bit of government funding to help advance their tech, but they've basically paid for a launch.

00:11:01.800 --> 00:11:05.660
<v SPEAKER_2>They've gone to land on the moon and then figured out what they, if they can do it.

00:11:05.660 --> 00:11:10.640
<v SPEAKER_2>And so that's going to make massively expand the level of activity.

00:11:10.640 --> 00:11:19.620
<v SPEAKER_1>More broadly than things that are, so you're drawing the connection between the exploration agenda, the increasing involvement of the private sector supporting that.

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<v SPEAKER_1>I had the opportunity to go into part of SpaceBound, the discussions a few months ago.

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<v SPEAKER_1>A really strong focus, drawn off a couple of reports have been done about the commercial opportunity for the Canadian economy writ large.

00:11:32.240 --> 00:11:53.620
<v SPEAKER_1>If you were to pick out a couple of different aspects where you think the Canadian economy writ large can really try and leverage off of this increasingly commercially accessible phase of space involvement, what would be a couple of scenarios where you think that are the biggest, broadest impact for the wider Canadian economy before we get into some of the defence and security applications?

00:11:53.640 --> 00:11:55.000
<v SPEAKER_2>Yeah, sure.

00:11:55.000 --> 00:12:00.240
<v SPEAKER_2>So space is good for national economies because it has a high economic multiplier.

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<v SPEAKER_2>And so various studies have been done that, you know, you're sort of getting at least a 2.5 economic multiplier.

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<v SPEAKER_2>So for every dollar you're putting into space, you're getting 2.5 times the return into your economy.

00:12:10.660 --> 00:12:22.180
<v SPEAKER_2>So these are very high tech jobs that involve high tech advanced manufacturing to be able to do and employ, you know, higher than average salaries in being able to do this.

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<v SPEAKER_2>And so that's just a foundational thing that is good.

00:12:25.380 --> 00:12:36.560
<v SPEAKER_2>For Canada, because of our history, as the third country that went into space with a satellite after the United States and USSR, Canada has a really strong 50-year-old history and a legitimate industrial capacity.

00:12:37.100 --> 00:12:53.140
<v SPEAKER_2>And so in our historical roots are in earth observation, so building satellites to be able to observe the earth and in communication satellites, building and operating satellites to provide communication services for internet, cell phones, broadcast, whatever

it is.

00:12:53.140 --> 00:13:02.260
<v SPEAKER_2>So these two areas happen to be, especially the communications one, the most rapidly evolving global economic part of space.

00:13:02.260 --> 00:13:11.740
<v SPEAKER_2>Canada has a legitimate chance to be the world leaders in that, just like MDA Space is part of that, as the world leader in digital communication satellites for low earth orbit.

00:13:11.740 --> 00:13:14.740
<v SPEAKER_2>And so this is an area that we can dramatically expand.

00:13:14.740 --> 00:13:38.240
<v SPEAKER_2>So that means that Canada as a nation has the ability to set up and run world leading internet networks and world leading direct to cell phone networks in our country, which has a dramatic impact on our economy, because if we put those in polar orbit, satellites going around the north and south pole, that means we get coverage over all of Canada.

00:13:38.240 --> 00:13:50.100
<v SPEAKER_2>So imagine Canada in five or six years with full internet coverage anywhere in the country where there's a piece of land, including anywhere you want to pick in the Arctic, and anywhere in that same space, people will be able to talk on their cell phone.

00:13:50.100 --> 00:13:51.840
<v SPEAKER_2>Like that's what we're talking about right now.

00:13:51.840 --> 00:13:56.880
<v SPEAKER_2>So that has a tremendous impact on enabling our base economy.

00:13:56.880 --> 00:14:01.040
<v SPEAKER_2>And then those same satellites, of course, go over all kinds of other countries in their orbit.

00:14:01.440 --> 00:14:05.760
<v SPEAKER_2>So now you end up with a really strong soft power export.

00:14:05.760 --> 00:14:11.960
<v SPEAKER_2>So as Canada is trying to make all these trade deals with other nations around the world, they say, hey, I can buy that from your country.

00:14:11.960 --> 00:14:13.880
<v SPEAKER_2>You know, these days, maybe it's a submarine or

something.

00:14:13.880 --> 00:14:15.480
<v SPEAKER_2>That's a big topic.

00:14:15.480 --> 00:14:22.500
<v SPEAKER_2>But it means that like, well, how about you buy, you know, communications from our country, because we're really strong in space-based communications.

00:14:22.500 --> 00:14:25.420
<v SPEAKER_2>So very useful tools to be able to leverage.

00:14:25.420 --> 00:14:36.600
<v SPEAKER_2>So our historical strengths then in observation, in communications, and in space robotics and operations, these are Canada's world-leading positions.

00:14:36.600 --> 00:14:39.300
<v SPEAKER_2>They have a lot of room for expansion still.

00:14:39.300 --> 00:14:42.580
<v SPEAKER_2>As you go forward, the foundation of that is the satellite.

00:14:42.580 --> 00:14:45.680
<v SPEAKER_2>So for us, for example, we're about to complete the construct...

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<v SPEAKER_2>We have completed the construction and are about to enable operation in a doubling of our manufacturing capacity in Montreal.

00:14:51.780 --> 00:15:01.620
<v SPEAKER_2>So we're going from a satellite manufacturing pace in 2025 at a peak of about one satellite a week and to in 2026 we'll hit...

00:15:01.620 --> 00:15:08.040
<v SPEAKER_2>We will now enter the era of two satellites a day, 10 a week, 400 a year.

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<v SPEAKER_2>And so when you're at that production pace, that core satellite then is like, you know, the ability to produce satellites for observation, for communications, for data centers, for, you know, all these different applications.

00:15:22.800 --> 00:15:26.500

<v SPEAKER_2>Then that enables that economy moving forward.

00:15:26.500 --> 00:15:36.520
<v SPEAKER_2>So it makes sense for us to pay attention to observation, communications, exploration, and then on communications, all the security around communications.

00:15:36.520 --> 00:15:38.660
<v SPEAKER_2>These are areas where Canada could be really strong.

00:15:38.660 --> 00:15:49.760
<v SPEAKER_1>So just drawing off the security angle of that, pivot a little bit into what the Canadian government, Department of National Defense are looking to do in this space.

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<v SPEAKER_1>I guess before getting into some of your thoughts about how Canada could approach it, maybe just give a bit of a sketch of, what do you see are the opportunities, the Department of National Defense, Royal Canadian Air Force in particular, what are they pursuing in their next bound of investment that you've noticed?

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<v SPEAKER_2>Yeah, it's a very important shift that's occurring.

00:16:09.080 --> 00:16:17.080
<v SPEAKER_2>So if we talk about where we've been or where we are just for a second, as a country, we've had to do a couple of things.

00:16:17.080 --> 00:16:19.340
<v SPEAKER_2>One is make sure we can observe our nation.

00:16:19.340 --> 00:16:26.620
<v SPEAKER_2>So we've had this focus on earth observation, especially on our maritime approaches in the Atlantic and Pacific Ocean and in the Arctic.

00:16:26.620 --> 00:16:37.800
<v SPEAKER_2>And so the whole evolution of synthetic aperture radar as a space-based satellite sensor to observe the earth, Canada decided that was going to be the best sensor.

00:16:37.800 --> 00:16:44.380
<v SPEAKER_2>MDA Space ended up getting those contracts and we are all now like world leaders in synthetic aperture radar based earth observation.

00:16:44.380 --> 00:16:47.160
<v SPEAKER_2>So we can observe the earth and observe our country.

00:16:47.160 --> 00:16:55.360
<v SPEAKER_2>We use space-based communications to be able to bring communication signals around the country.

00:16:55.360 --> 00:17:01.160
<v SPEAKER_2>The military uses a lot of satellite communications for military operations, but they get it from the United States.

00:17:01.160 --> 00:17:05.500
<v SPEAKER_2>The military uses GPS and positioning systems, but they get it from the United States.

00:17:05.940 --> 00:17:10.840
<v SPEAKER_2>We have our earth observation for our activities in Canada and we use that.

00:17:10.840 --> 00:17:18.420
<v SPEAKER_2>We can use some of it for expeditionary operations, but we also get a lot of intelligence data from the United States.

00:17:18.420 --> 00:17:21.640
<v SPEAKER_2>I feel we're about to go through a shift now in that defence.

00:17:21.640 --> 00:17:29.020
<v SPEAKER_2>So in the themes that we all see and talk about every day, unless you're living under a rock these days, you kind of know what's going on here.

00:17:29.020 --> 00:17:35.120
<v SPEAKER_2>Everybody's talking about how to have increased defence, increased security, increased autonomy as a nation.

00:17:36.100 --> 00:17:40.180
<v SPEAKER_2>So Canada and the Department of National Defence is no different in any of that.

00:17:40.180 --> 00:17:42.900
<v SPEAKER_2>So you go back when you work through those.

00:17:42.900 --> 00:17:44.280
<v SPEAKER_2>So you go back to surveillance.

00:17:44.280 --> 00:17:53.360
<v SPEAKER_2>The Department of National Defence will increase and make additional significantly larger than the past investments in earth observation capability.

00:17:53.820 --> 00:18:00.440
<v SPEAKER_2>The Department of National Defence will make new

investments in space-based satellite communications.

00:18:00.440 --> 00:18:06.200
<v SPEAKER_2>And so instead of leveraging off the Americans, we have our own Canadian satellite communications network.

00:18:06.200 --> 00:18:16.260
<v SPEAKER_2>So recently it was announced a strategic agreement between the Department of National Defence, Telesat and MDA Space, to be able to advance Arctic communications.

00:18:17.380 --> 00:18:23.980
<v SPEAKER_2>That's the focus, to make sure you have multiple bands of Arctic communications available to support military operations.

00:18:23.980 --> 00:18:26.180
<v SPEAKER_2>But of course satellites don't just fly over the Arctic.

00:18:26.180 --> 00:18:28.020
<v SPEAKER_2>They will provide that service.

00:18:28.020 --> 00:18:37.560
<v SPEAKER_2>But that will provide a satellite communication service that's expandable for Canada, global, for military operations, including whatever allies we would like to bring into that conversation.

00:18:37.560 --> 00:18:40.320
<v SPEAKER_2>So that's a very important transition.

00:18:40.320 --> 00:18:49.420
<v SPEAKER_2>Another one would be, I mentioned GPS, where Canada, like many nations, is relying on a GPS from primarily American-based systems.

00:18:49.420 --> 00:18:55.400
<v SPEAKER_2>In the satellite business, you call that PNT, Position Navigation and Timing, so PNT satellites.

00:18:55.400 --> 00:19:01.100
<v SPEAKER_2>And so another area of focus for future Canadian investment would be alternative PNT capability.

00:19:01.520 --> 00:19:11.480
<v SPEAKER_2>It's been calculated that if Canada loses access to the GPS system or the PNT system, it could have up to a billion dollar a day impact on the Canadian economy.

00:19:11.480 --> 00:19:16.220
<v SPEAKER_2>And so, like, that's not good for autonomy or security or

economic sovereignty.

00:19:16.220 --> 00:19:25.020
<v SPEAKER_2>So how are we going to get, from a Defence perspective, and in securing the country perspective, an alternative PNT system for the country?

00:19:25.020 --> 00:19:28.420
<v SPEAKER_2>So that would be another big investment area for the future.

00:19:28.420 --> 00:19:36.320
<v SPEAKER_2>And then finally, once you have all those billions of dollars of infrastructure that are now in orbit, you need to take care of them.

00:19:36.320 --> 00:19:39.460
<v SPEAKER_2>You need, just like anything, you have to maintain them and you have to protect them.

00:19:39.460 --> 00:19:41.220
<v SPEAKER_2>That's the business of defence.

00:19:41.220 --> 00:19:53.140
<v SPEAKER_2>And so there will be another aspect that will evolve called space control, which will be a new type of military platform, like on Earth we have ships and we have tanks and we have fighter jets and helicopters and all the things.

00:19:53.140 --> 00:20:11.240
<v SPEAKER_2>In space, you don't need to have a space control spacecraft that could fly around and protect your assets and secure and protect your space assets or contribute to the allied posture of protecting a group of countries' space assets or their civilian companies' space assets because those are now critical infrastructure for the nation.

00:20:11.240 --> 00:20:20.100
<v SPEAKER_2>So a new area of expanded spend will be in the space control domain to be able to have military operational capability to protect our assets in space.

00:20:20.100 --> 00:20:41.120
<v SPEAKER_1>Beyond the opportunity which you sketched out, the Prime Minister, every time I hear him talk about the need to make significant investments as are rolling out this fiscal year and beyond, also follows that statement with a second statement, second paragraph to a speech outlining his view about the need to use those dollars in a different way to benefit Canada, Canadian economy.

00:20:41.120 --> 00:20:50.160
<v SPEAKER_1>We're recording this conversation without the Defence Industrial Strategy having yet been released, but there's been an awful lot of conversation about that in the last year and a bit.

00:20:50.160 --> 00:20:57.720
<v SPEAKER_1>Maybe just start this off by giving your reflection on what you're hearing from the government when it's talking about leveraging spend on defence differently.

00:20:58.220 --> 00:20:58.760
<v SPEAKER_2>Sure.

00:20:58.760 --> 00:21:05.320
<v SPEAKER_2>I think that the three big things that I hear, which are like all great things to hear, one is that we're going to increase our spending on defence.

00:21:05.320 --> 00:21:10.840
<v SPEAKER_2>The second is that we're going to engage Canadian industry first, when Canadian industry has the capability to do so.

00:21:10.840 --> 00:21:24.960
<v SPEAKER_2>And then the third is that the export and international trade side of government is going to now start to, and they have, I've seen it, increasingly partner with Canadian industry to get our offering on the table globally in international trade discussions and help on the export side.

00:21:24.960 --> 00:21:27.560
<v SPEAKER_2>Those are all three far overdue things.

00:21:27.760 --> 00:21:28.820
<v SPEAKER_2>They are now happening.

00:21:28.820 --> 00:21:30.100
<v SPEAKER_2>That is real.

00:21:30.100 --> 00:21:39.500
<v SPEAKER_2>Of those, the most challenging one is the second one, which is to engage Canadian industry first, when Canadian industry has the capability to do so.

00:21:39.500 --> 00:21:46.140
<v SPEAKER_2>That involves the most cultural change, and that's the hardest thing for people to adapt to and get their heads around.

00:21:46.140 --> 00:21:52.220
<v SPEAKER_2>There has been a historical feeling that Canadian industry doesn't necessarily have a lot of capability.

00:21:53.480 --> 00:21:58.060
<v SPEAKER_2>Broadly, we have capability, and in some areas we are legit world leaders.

00:21:58.060 --> 00:22:03.940
<v SPEAKER_2>Space is one, so I can talk to that, but others, simulation and training with CAE, for example.

00:22:03.940 --> 00:22:08.840
<v SPEAKER_2>There are pockets in Canada where we're legitimate world leaders in what we do.

00:22:08.840 --> 00:22:17.120
<v SPEAKER_2>And so in those areas, those are areas where immediately we should be partnering with Canadian industry for that capability.

00:22:18.440 --> 00:22:43.940
<v SPEAKER_2>We're seeing some of that, but we still see folks because of all the historical ties to other nations and interoperability and working with people and knowing what their kit is, they're still at the operational level in the military, often strong desires to buy the things that other countries have and use and coming up with the arguments as to why that's an operational necessity.

00:22:44.660 --> 00:22:55.260
<v SPEAKER_2>And the discussions then, is it really or if Canada has the capability, should we not just buy the Canadian things in accordance with the guidance that's now coming from central government?

00:22:55.260 --> 00:22:59.220
<v SPEAKER_2>That's tension now in the system and trying to cause that shift.

00:22:59.220 --> 00:23:03.920
<v SPEAKER_2>And then I think that people need to get used to a bit of a roadmap on that.

00:23:03.920 --> 00:23:12.840
<v SPEAKER_2>So today, there are areas of the Canadian Defence Industrial Base where we do have a world leading capability today, we should be buying that like I just said.

00:23:14.160 --> 00:23:20.080
<v SPEAKER_2>Then there are the things that we need to buy maybe five years from now and have a roadmap for that.

00:23:20.080 --> 00:23:27.620
<v SPEAKER_2>So if we're going to buy something five years from now,

what do we have like 75 or 80% of the capability to deliver that in Canada right now?

00:23:27.620 --> 00:23:32.260
<v SPEAKER_2>And we can work together to ensure that that could become a Canadian delivered thing.

00:23:32.260 --> 00:23:35.960
<v SPEAKER_2>And there will be a lot of those and Canada has no history in that.

00:23:35.960 --> 00:23:44.780
<v SPEAKER_2>All of our DRDC investments over the years and doing R&D and developing stuff, there are very, very few examples where that has turned into operational capability.

00:23:44.780 --> 00:23:46.540
<v SPEAKER_2>Everyone in the country will agree with that.

00:23:46.540 --> 00:23:55.780
<v SPEAKER_2>And so this notion of developing something for five years out, getting it ready and then buying it and making it operational, completely new behaviour that would need to come.

00:23:55.780 --> 00:24:05.980
<v SPEAKER_2>And then the third bound might be ten years out, which is what differentiating military capability would be awesome for Canada to have and the industrial bait could deliver it.

00:24:05.980 --> 00:24:26.540
<v SPEAKER_2>I put things like quantum in that category, whereby we're not going to buy a quantum system for tomorrow, maybe or maybe not for the next five years, but maybe out there for sure to say, what would that look like and how would we vector some of this emerging quantum capability or AI capability in the country towards some quite differentiating technology in the future.

00:24:26.540 --> 00:24:45.260
<v SPEAKER_2>Organising those thoughts and having the defence procurement base, the operators that are developing their requirements for the future to say, on purpose, I'm going to have this capability which will make us great as a military and I'm going to do with Canadian industry which will make us great as a country.

00:24:45.260 --> 00:24:53.580
<v SPEAKER_2>That seems pretty easy to say and in the United States or France or Israel or all kinds of countries, that's just a normal day.

00:24:53.580 --> 00:24:56.000
<v SPEAKER_2>In Canada, that has never been a normal day.

00:24:56.000 --> 00:25:00.240
<v SPEAKER_2>And so the amount of cultural change that has to go into that, I think is the most challenging area.

00:25:00.240 --> 00:25:14.280
<v SPEAKER_2>It is just starting to happen, it's got some sputters in the early days, but if we can really conquer that over, let's say this administration over the next four years and get some momentum on that, it will be powerful.

00:25:16.300 --> 00:25:19.740
<v SPEAKER_1>This episode of Defence Deconstructed is brought to you by Irving Shipbuilding.

00:25:19.740 --> 00:25:22.260
<v SPEAKER_1>Canada's national shipbuilder is currently hiring.

00:25:22.260 --> 00:25:27.280
<v SPEAKER_1>For more information on the many jobs and opportunities currently available, please visit www.shipsforcanada.ca.

00:25:32.760 --> 00:25:35.880
<v SPEAKER_1>So a couple of parts to that, based on what the government said so far.

00:25:35.880 --> 00:25:39.280
<v SPEAKER_1>So one is the buy Canada provisions, buy Canadian provisions.

00:25:39.280 --> 00:25:50.280
<v SPEAKER_1>I'm starting to see that roll out, different policy instruments from the government specifying, defaulting to Canadian suppliers, and then specific provisions about different commodity types.

00:25:50.280 --> 00:25:55.480
<v SPEAKER_1>The other component to that is there's been a lot of discussion around developing a list of sovereign capabilities.

00:25:55.480 --> 00:25:58.320
<v SPEAKER_1>Sovereignty is a word that you used a couple of times already in the conversation.

00:25:59.080 --> 00:26:05.320
<v SPEAKER_1>So to your mind, what would your recommendation be to the government as it configures a list of sovereign capabilities?

00:26:05.600 --> 00:26:06.600
<v SPEAKER_1>What should that entail?

00:26:06.800 --> 00:26:10.380
<v SPEAKER_1>How, from your view, should they go about defining those?

00:26:10.380 --> 00:26:24.160
<v SPEAKER_2>Yeah, you really need to look at the operations of the country, both in terms of what we need to do to function and work and live as a country, and then what we need to make our economy work to be able to...

00:26:24.160 --> 00:26:25.140
<v SPEAKER_2>Some of them are essential.

00:26:25.280 --> 00:26:38.040
<v SPEAKER_2>You need to be able to have food and fuel and certain telecommunications to be able to make a power electricity, to be able to make a basic country work these days.

00:26:38.040 --> 00:26:43.600
<v SPEAKER_2>So some of those are going to be benefited from sovereign capability to be able to have the essentials.

00:26:43.600 --> 00:26:58.660
<v SPEAKER_2>Then you get into choices in terms of we are choosing to have other capabilities of sovereign capability because we believe it's going to be a differentiator in the world economy or a differentiator in our contribution to some form of an allied team or a trade team.

00:26:58.660 --> 00:27:06.440
<v SPEAKER_2>And so those are going to be choices and we just have to pick which ones are going to be the most beneficial for the country.

00:27:06.440 --> 00:27:18.200
<v SPEAKER_1>I think, at least on my read, the government's having an interrelationship of a number of the different elements that they're bringing forward on procurement, change and reform that come into this focus on Canadian companies.

00:27:18.340 --> 00:27:22.120
<v SPEAKER_1>You mentioned already the strategic partnership that you're involved in.

00:27:22.120 --> 00:27:33.360
<v SPEAKER_1>And so far, at least so that I've caught, all the strategic partnerships have involved Canadian firms, or at least firms that have very significant Canadian activity irrespective of where they might be headquartered.

00:27:34.620 --> 00:27:36.860

<v SPEAKER_1>Can you just talk a little bit about your experience with that so far?

00:27:36.860 --> 00:27:49.520
<v SPEAKER_1>I mean, that seems to be something that the people involved in it have been quite happy with, but there's a little bit of uncertainty about what exactly it entails if you get one of these designations and what that opens up in terms of your activity in working with the Crown.

00:27:49.860 --> 00:28:03.140
<v SPEAKER_2>Yeah, so in my experience, then, when the decision has been made that we're going to procure something, in the example that I'm involved in, we have Arctic Communications, space-based communications in the Arctic.

00:28:03.140 --> 00:28:06.120
<v SPEAKER_2>And you say, okay, what do we have in Canada?

00:28:06.120 --> 00:28:13.260
<v SPEAKER_2>We have one large significant company that builds satellites that are available for arch communications, MDA Space.

00:28:13.260 --> 00:28:18.320
<v SPEAKER_2>We have one large Canadian company that operates space-based networks for a living in Telesat.

00:28:19.140 --> 00:28:21.960
<v SPEAKER_2>Okay, so let's get those two, that's it.

00:28:21.960 --> 00:28:26.520
<v SPEAKER_2>There are two big ones and then they have lots of little companies that work with them, but those are the two big ones.

00:28:26.520 --> 00:28:35.940
<v SPEAKER_2>So let's just lock into a strategic partnership, D&D, with these companies and say, okay, we are going to together deliver polar communications for the military.

00:28:35.940 --> 00:28:37.100
<v SPEAKER_2>Great.

00:28:37.100 --> 00:29:02.940
<v SPEAKER_2>Once you say that, the ability to accelerate the process is phenomenal, from my experience, and so the historical military procurement process, which we are all familiar with, would take something from a concept, go through options analysis, where the military will study all the options, and they will release requests for information, and they will pick up options globally from industry, and what are the different things we could do, and they will study

that, and come down with some preferred options.

00:29:02.940 --> 00:29:09.980
<v SPEAKER_2>They will go to their bosses and say, can I go to the next step in the definition phase, and really work through the definition of this preferred option?

00:29:09.980 --> 00:29:13.120
<v SPEAKER_2>They will spend multiple years going through definition phase to do that.

00:29:13.440 --> 00:29:17.600
<v SPEAKER_2>They will say, okay, I figured this out, I would like to go to procurement next, and do this next phase.

00:29:17.600 --> 00:29:27.080
<v SPEAKER_2>And so you end up with a two or three year options analysis, and a two to ten year definition phase, depending on your favorite project you want to track, and an implementation phase to do that.

00:29:27.080 --> 00:29:33.940
<v SPEAKER_2>In this new system, when you go under a strategic arrangement, you already know who your industrial partner is.

00:29:33.980 --> 00:29:44.700
<v SPEAKER_2>So what I've seen is the ability to complete options analysis is phenomenal, because you've got the entire industrial team working with the entire military team to do options analysis.

00:29:44.700 --> 00:29:55.020
<v SPEAKER_2>You can blast through a large number of options with all the data, technical and financial, and in a very short period of time, months instead of years, end up with a preferred option.

00:29:55.020 --> 00:29:56.780
<v SPEAKER_2>And then you go through a definition phase.

00:29:56.780 --> 00:30:05.440
<v SPEAKER_2>Again, the same gang of people that's going to work together to deliver this thing, and you define what you're going to do technically and financially, and get it sorted in months, not years.

00:30:05.440 --> 00:30:13.180
<v SPEAKER_2>So now you've just done options analysis and definition, maybe in less than a year, certainly in less than two, instead of anywhere from two to ten, historically.

00:30:13.180 --> 00:30:15.660
<v SPEAKER_2>And so, and then you get an implementation.

00:30:15.660 --> 00:30:20.180
<v SPEAKER_2>So and the, yeah, it's just very, very powerful.

00:30:20.180 --> 00:30:21.140
<v SPEAKER_2>There's no fooling around.

00:30:21.140 --> 00:30:22.880
<v SPEAKER_2>You know how this is going to be done.

00:30:23.620 --> 00:30:26.680
<v SPEAKER_2>And you can just rock it through the process.

00:30:26.680 --> 00:30:31.060
<v SPEAKER_2>So it is a really, really strong tool that we put on the table here.

00:30:32.580 --> 00:30:38.080
<v SPEAKER_1>What are some other things that you think the government should be considering as it builds out its new approach to procurement?

00:30:38.080 --> 00:30:46.960
<v SPEAKER_1>So that strategic partnership model that you just outlined, lots of utility there, but you can't, I don't think there's probably an ability to apply that everywhere and in all phases.

00:30:46.960 --> 00:30:55.560
<v SPEAKER_1>So that I think for the government to achieve their objectives, they're going to have to do some other things in terms of the way that they approach their overall acquisition portfolio.

00:30:55.560 --> 00:30:57.980
<v SPEAKER_1>What are some things that Mr.

00:30:57.980 --> 00:31:06.960
<v SPEAKER_1>Guzman, the CEO of the Defence Investment Agency, that you would be encouraging him to be considering outside of this partnership model and some of the other industrial strategy provisions?

00:31:06.960 --> 00:31:11.060
<v SPEAKER_2>Probably not in the Defence Intelligence Agency, but they would be the recipient of it.

00:31:11.060 --> 00:31:15.040
<v SPEAKER_2>But in the Defence Community for sure is this notion of a roadmap.

00:31:15.040 --> 00:31:24.720

<v SPEAKER_2>So right now, we say we're going to go from 60, 80 billion a year, whatever the number is of defence spend today, to 150 billion dollars a year a decade from now.

00:31:24.720 --> 00:31:25.500
<v SPEAKER_2>That's a lot.

00:31:25.500 --> 00:31:32.900
<v SPEAKER_2>If you're going to spend like 100 billion dollars a year more regularly, like what are you going to spend that on?

00:31:32.900 --> 00:31:40.820
<v SPEAKER_2>To roadmap that would be incredibly powerful for people to say like, okay, I got that.

00:31:40.820 --> 00:31:41.980
<v SPEAKER_2>That makes sense.

00:31:42.000 --> 00:31:49.800
<v SPEAKER_2>Once you roadmap that, then what I talked about before, you can start to move on, which is, you know, there's gaining capability on some of these things today.

00:31:49.800 --> 00:31:52.380
<v SPEAKER_2>We could sign a strategic agreement and go.

00:31:52.380 --> 00:32:05.200
<v SPEAKER_2>There are other things that, you know, we could be ready for five years from now, and we could start doing, you know, development to be able to operationalize capability in the Canadian industrial base, ready to be able to buy five years ago.

00:32:05.200 --> 00:32:12.100
<v SPEAKER_2>So that roadmap allows you to get ahead of it, and it allows industry to invest, and it makes everything work.

00:32:12.100 --> 00:32:19.680
<v SPEAKER_2>There's another big cultural change for us in Canada is this transition between development and capability.

00:32:19.680 --> 00:32:25.560
<v SPEAKER_2>So in Canada, you've always had defence research and development, and you've had various things going on.

00:32:25.560 --> 00:32:30.660
<v SPEAKER_2>But I mentioned earlier that it's been very rare for that to translate into operational capability.

00:32:30.660 --> 00:32:37.760
<v SPEAKER_2>There's been kind of a historical belief that it's okay

to play around with R&D, and it's okay to learn and understand as a result.

00:32:37.760 --> 00:32:44.300
<v SPEAKER_2>But when you go to buy something, you probably should buy the thing that the other militaries are using, because that's the thing that's going to work.

00:32:44.300 --> 00:32:49.240
<v SPEAKER_2>This mental shift to Canadian industry is going to deliver the thing that's going to work.

00:32:49.240 --> 00:32:52.640
<v SPEAKER_2>I'm going to work with them through development to ensure that that's the case.

00:32:52.640 --> 00:32:55.180
<v SPEAKER_2>That's the new mindset that has to be created.

00:32:55.180 --> 00:33:02.440
<v SPEAKER_2>And so as a result, you have to transition things from early R&D into operations.

00:33:02.440 --> 00:33:15.700
<v SPEAKER_2>Our procurement system, which has always got itself caught up in, like, you can't have favoritism, you can't pick winners, you can't have bias, unlike any other procurement system in the world for the military, which picks their own countries all the time.

00:33:15.700 --> 00:33:17.320
<v SPEAKER_2>But we've been caught up in that.

00:33:17.320 --> 00:33:26.640
<v SPEAKER_2>As a result, people have shied away from government R&D contracts, because it's used against you in the future procurement, that if you were involved in the R&D, you can't bid on the real system.

00:33:26.640 --> 00:33:29.360
<v SPEAKER_2>There's dozens of stories in Canada like this.

00:33:29.360 --> 00:33:31.000
<v SPEAKER_2>That must go away.

00:33:31.000 --> 00:33:44.560
<v SPEAKER_2>It just must be completely eradicated, whereby we're going to develop this, we're going to take it from phase one to phase two to phase three, whatever those phases are, and in phase three, it's going to be ready for an operational thing, and we're going to procure $2 billion of it.

00:33:44.560 --> 00:33:46.320
<v SPEAKER_2>That's completely new.

00:33:47.220 --> 00:34:04.440
<v SPEAKER_2>So first is the roadmap, and then second is the, kind of like the, almost the SBIR, that's the United States term, where you can get a few hundred thousand dollars, and if you do well, you can get millions, and if you do well, you can get tens of millions, and if you do well, we'll buy the thing and make it operational.

00:34:04.440 --> 00:34:06.780
<v SPEAKER_2>It needs to be like that in Canada.

00:34:06.780 --> 00:34:09.420
<v SPEAKER_2>And so that has to be created.

00:34:09.420 --> 00:34:31.880
<v SPEAKER_2>So first the roadmap, and then the second, use the strategic agreements, which you mentioned we already have, for the capability we're ready to go, and then have a system which says, you can be picked as the one that's going to develop this, or one of three, and then one of the three of you, after three steps, is going to get the system, and it's still going to be built in Canada, and we're not going to pay attention to what the rest of the world has, we're building in Canada.

00:34:31.880 --> 00:34:41.320
<v SPEAKER_2>That entire new behaviour is where the Defence Investment Agency and or whatever procurement system we want to have, we have to fix that for this to work.

00:34:42.620 --> 00:34:51.600
<v SPEAKER_1>So the government has had a lot of focus on the potential for dual use technology, and I think it's looking to try and leverage some of the things that you just laid out.

00:34:51.600 --> 00:35:08.300
<v SPEAKER_1>So different and I think more logical, bluntly, way of spending dollars on research and development and having that actually benefit a direct Canadian capability need down the road, but then also having that pull over to potential commercial application.

00:35:08.820 --> 00:35:22.880
<v SPEAKER_1>I think it strikes me that space has a much longer multi-generational track record of having the same types of technology serve both strictly commercial and strictly government, even into the secret classified, all that kind of stuff.

00:35:22.880 --> 00:35:42.540

<v SPEAKER_1>Beyond what you've just articulated, are there any particular things that you would offer that from the original dual use sector that the government could think about in trying to craft a defence industrial strategy that can have the type of benefit it's looking for in its commercial applications, as it plays around with this term, dual use, which means a lot of different things to a lot of people.

00:35:42.540 --> 00:35:43.280
<v SPEAKER_2>Yeah.

00:35:43.280 --> 00:35:51.000
<v SPEAKER_2>I think one of the most important things is to have credibility in the definition of a dual use technology.

00:35:51.000 --> 00:35:56.180
<v SPEAKER_2>So I think I can be biased, but space is definitely a dual use technology.

00:35:56.180 --> 00:36:05.720
<v SPEAKER_2>The satellites that we put up for digital communications for the commercial sector are going to be the satellites that we offer a military for digital communications for the military.

00:36:05.720 --> 00:36:06.840
<v SPEAKER_2>It's the same satellite.

00:36:07.220 --> 00:36:13.560
<v SPEAKER_2>They may have a different frequency band in the satellite because now it's a military frequency, but it's the same satellite.

00:36:13.680 --> 00:36:23.320
<v SPEAKER_2>So it's legit dual use technology that it serves a civilian purpose for Apple talking to iPhones as it does to be able to serve a military to operate.

00:36:23.320 --> 00:36:24.340
<v SPEAKER_2>That's important.

00:36:24.340 --> 00:36:33.020
<v SPEAKER_2>If we take this thing, if we stretch this and say, well, agriculture is dual use because civilians need food and the military needs to eat too.

00:36:34.720 --> 00:36:40.740
<v SPEAKER_2>You get into some fuzzy zones if you start to say, well, my agriculture spend is really my military spend because it's feeding the military.

00:36:40.740 --> 00:36:45.500

<v SPEAKER_2>I tried to pick that as an example, sorry, agriculture people, but something that was like be extreme.

00:36:46.040 --> 00:36:52.080
<v SPEAKER_2>So having credibility around that I think is super important whereby you can talk to that technology and it really is.

00:36:52.080 --> 00:37:10.200
<v SPEAKER_2>So a lot of the stuff around surveillance types of sensors, those will be dual use, the same things we use to survey infrared sensors in space or wherever to be able to track military assets, then you can definitely still use that to detect forest fires or whatever else.

00:37:11.420 --> 00:37:26.800
<v SPEAKER_2>So sensors, communications, computer processing, different levels of materials if they're for protection, they could provide you with definitely like all weather capability in a civilian context and legitimate military protection in some forms.

00:37:26.880 --> 00:37:31.500
<v SPEAKER_2>But it's picking those technologies that credibly have a use in both domains.

00:37:31.500 --> 00:37:33.540
<v SPEAKER_2>That's a key thing for me.

00:37:33.540 --> 00:37:43.240
<v SPEAKER_1>The third area that you had mentioned that from your standpoint, the government should think about in terms of its agenda around industrial strategy was the trade piece.

00:37:43.240 --> 00:37:43.540
<v SPEAKER_2>Yeah.

00:37:43.540 --> 00:37:46.240
<v SPEAKER_1>I wanted to circle back on that.

00:37:46.240 --> 00:37:48.140
<v SPEAKER_1>So I think I would totally agree.

00:37:48.140 --> 00:38:02.580
<v SPEAKER_1>I mean, it's been refreshing to see the surge in involvement from some of the wider actors in the Canadian trade promotion and support piece that had not been significant players in defence, discovering a passion for it in a real hurry.

00:38:02.680 --> 00:38:06.680
<v SPEAKER_1>What do you think are some things for the government to consider as it does this?

00:38:06.680 --> 00:38:15.280
<v SPEAKER_1>I guess one of my observations is we're not the only people doing this, and there's some other people that are pretty competitive in this and have been doing this for a long time.

00:38:15.280 --> 00:38:24.480
<v SPEAKER_1>This obviously ties into the government's wider diversification agenda, but you can't be everywhere at once, and you have to be, I think, a little bit more selective than...

00:38:24.480 --> 00:38:30.240
<v SPEAKER_1>There's at least been discuss this thus far about how much you can support, how broadly, how many different markets, et cetera.

00:38:30.340 --> 00:38:36.020
<v SPEAKER_1>What are some of your thoughts about what you'd encourage the government to consider as it pursues that agenda?

00:38:36.020 --> 00:38:38.380
<v SPEAKER_2>The biggest thing, I think, is awareness.

00:38:38.380 --> 00:38:49.860
<v SPEAKER_2>And so, as you mentioned, our foreign relations and international trade type folks don't necessarily get out of bed and have an awareness of Canadian industrial capability.

00:38:49.860 --> 00:38:54.680
<v SPEAKER_2>It's not, I don't know what their training is, but when I bump into them, they generally, oh my gosh, you do that?

00:38:54.680 --> 00:38:55.640
<v SPEAKER_2>That's great.

00:38:55.640 --> 00:38:58.040
<v SPEAKER_2>You know, so there's not a lot of awareness there.

00:38:58.040 --> 00:39:00.940
<v SPEAKER_2>And so, you need to have awareness.

00:39:00.940 --> 00:39:13.200
<v SPEAKER_2>It probably needs to be intermediate to baby advanced level awareness, whereby in certain areas, like, you know, MDA Space has a capability to deliver surveillance and communication satellites.

00:39:13.780 --> 00:39:23.180
<v SPEAKER_2>Every country, now, Wall Street Journal this morning actually wrote an article on the cool thing to have as a country these days is satellites, because they give you sovereignty and security.

00:39:23.180 --> 00:39:25.100
<v SPEAKER_2>There's a Wall Street Journal article this morning about that.

00:39:25.100 --> 00:39:25.780
<v SPEAKER_2>It's true.

00:39:25.780 --> 00:39:26.980
<v SPEAKER_2>Everyone's talking to us about it.

00:39:26.980 --> 00:39:34.740
<v SPEAKER_2>Everybody wants satellites to say, I can monitor my country and I can have communications and no one can take it away from me, because I'm controlling it, so I have sovereignty.

00:39:34.740 --> 00:39:41.300
<v SPEAKER_2>And so, we have this capability, and you can offer it to any nation to help them with their sovereignty.

00:39:41.300 --> 00:39:46.440
<v SPEAKER_2>But then it's like, okay, but like probably every other country that builds satellites is going to be saying that too.

00:39:46.440 --> 00:39:49.880
<v SPEAKER_2>So, why are our satellites better or different?

00:39:49.880 --> 00:39:52.480
<v SPEAKER_2>That's kind of the intermediate advance level of awareness.

00:39:52.480 --> 00:40:00.900
<v SPEAKER_2>So, like having an awareness of the industrial capability in the country, but in maybe two dozen areas, know why that Canadian.

00:40:00.900 --> 00:40:06.340
<v SPEAKER_2>So, I think that's on the government to seek that knowledge, but it's on us to educate them.

00:40:06.340 --> 00:40:13.840
<v SPEAKER_2>So, us and our industrial associations probably need to like figure out, okay, how can we help make these people don't have a history?

00:40:13.840 --> 00:40:18.820
<v SPEAKER_2>How are we going to make them smart in how to take this new enthusiasm to the street?

00:40:18.820 --> 00:40:20.280
<v SPEAKER_2>So, it's not just scattered.

00:40:20.280 --> 00:40:37.080
<v SPEAKER_2>It's like we really know that in the areas where we have unique capability and we're building strategic agreements to accelerate that through defence procurement in Canada and it's differentiated internationally and can put on the table in a soft power trade negotiations with another nation and here's how you do that.

00:40:37.080 --> 00:40:39.680
<v SPEAKER_2>We should get organized around that because that would be really powerful.

00:40:39.920 --> 00:40:45.000
<v SPEAKER_2>And right now, we're not organized around that yet because it's all new and people don't have a history in that knowledge.

00:40:46.200 --> 00:41:13.640
<v SPEAKER_1>Just to tease on this a little bit more, as the government's looking at these opportunities and there's been a lot of focus on Europe, we still have our Indo-Pacific strategy and I think a pretty well articulated case for having more engagement with Indo-Pacific partners, where do you think are some of the key opportunities in the space sector for Canada maybe with a bit of a flavour around what are some of the markets where we haven't always thought to engage with, where there's an opportunity for Canada to look and strengthen those ties?

00:41:13.640 --> 00:41:25.600
<v SPEAKER_2>Yeah, I think on the space side for surveillance and communication, again back to that Wall Street Journal article I mentioned, the interesting thing is it's becoming every country.

00:41:25.600 --> 00:41:33.960
<v SPEAKER_2>And so countries that are big enough to buy and operate their own, then they are, they're starting procurement projects to do that.

00:41:33.960 --> 00:41:39.320
<v SPEAKER_2>And then countries that are not, they want to figure out how to get kind of a sovereign service.

00:41:39.320 --> 00:41:43.360
<v SPEAKER_2>You know, can I go to a Canadian company that's operating a global space network?

00:41:43.360 --> 00:41:46.600
<v SPEAKER_2>And can I get a secure communication service from them?

00:41:46.600 --> 00:41:53.620
<v SPEAKER_2>I'm kind of more comfortable it's a Canadian space-based service than maybe from another country that could change its mind if I get it all of a sudden.

00:41:53.620 --> 00:42:00.920
<v SPEAKER_2>I feel that Canada is kind of a reliable partner for me to claim I've got a sovereign communication service that Canada is not going to take away from me.

00:42:00.920 --> 00:42:04.600
<v SPEAKER_2>And so that's an increasing conversation with the smaller countries.

00:42:04.720 --> 00:42:11.340
<v SPEAKER_2>And then the bigger countries is, you know, we can sell you the kit and set you up to operate your own space networks, no problem.

00:42:11.340 --> 00:42:18.960
<v SPEAKER_2>And so I realize I didn't answer your question by picking a certain country, but that's a thing.

00:42:18.960 --> 00:42:41.060
<v SPEAKER_2>The other one that we're seeing is the link to the trade stuff, whereby as Canada is increasing its defence procurement, those countries where we don't have the capability in Canada and we are going to buy from another country, then all of a sudden we end up with what is the industry technology benefits going to be for that.

00:42:41.060 --> 00:42:44.500
<v SPEAKER_2>And so, for example, on submarines right now, we're seeing that.

00:42:44.500 --> 00:42:51.040
<v SPEAKER_2>We've down selected a German company and a Korean company in Canada to be the candidates to provide us with submarines.

00:42:51.040 --> 00:42:56.140
<v SPEAKER_2>Both of those nations and their large corporations are figuring out what kind of business can I give Canada.

00:42:56.540 --> 00:43:02.980
<v SPEAKER_2>In those examples, they're all creating opportunities for Canadian-based space companies.

00:43:02.980 --> 00:43:14.520
<v SPEAKER_2>So we've recently signed an agreement with Hanwha, for example, which is the South Korean candidate for the submarine, to partner with them to pursue the Korean military space-based

communications constellations.

00:43:14.520 --> 00:43:15.940
<v SPEAKER_2>These are very, very large deal.

00:43:15.940 --> 00:43:22.000
<v SPEAKER_2>These are like a lot of satellites to build a global military network for South Korea, for their military operations.

00:43:22.000 --> 00:43:30.320
<v SPEAKER_2>And so the chance to get that partnership in response to them having an opportunity is to sell Canadian submarines, you know, that's working.

00:43:31.140 --> 00:43:37.560
<v SPEAKER_2>And we would expect to see more of those if we continue to spend at the rates that we're claiming we're going to continue to spend.

00:43:38.160 --> 00:43:41.700
<v SPEAKER_1>Do you think that's just as a final substantive thought?

00:43:41.700 --> 00:43:44.040
<v SPEAKER_1>Do you think that there's real opportunity in that for the government to think?

00:43:44.040 --> 00:43:55.080
<v SPEAKER_1>Because you talked about a whole bunch of different things stitching together, more spend, potentially more predictability with it, changed approach, more of a strategic focus on supporting Canadian companies.

00:43:55.240 --> 00:44:20.260
<v SPEAKER_1>I guess on this last piece, I think what I've seen that you were characterizing there with the government on submarines, it's reflecting a totally un-Canadian, I guess in recent history, approach of trying to be really strategic and trying to negotiate the best deal for the country, comprehensively, capability, cost, benefit to the government, not just in the traditional, very formulaic industrial technological benefit offset regime, but a bigger, better deal.

00:44:20.260 --> 00:44:31.140
<v SPEAKER_1>How much space do you think there is for Canada to try and champion in that kind of an approach where we don't just rely on adding up evaluation points in a spreadsheet, but you get into an actual strategic level negotiation?

00:44:31.140 --> 00:44:33.300
<v SPEAKER_2>Yeah, I think there's a lot of room for growth.

00:44:33.300 --> 00:44:44.240
<v SPEAKER_2>I think there's some, from, if I was gonna be selfish from a defence and space industrial sector perspective, I'd say, please don't forget defence reciprocation.

00:44:45.060 --> 00:44:57.500
<v SPEAKER_2>So we've seen some creative things recently, which is like, if this company sells Canada submarines, then the industrial offset is not just from that company, it's from that country.

00:44:57.500 --> 00:45:00.500
<v SPEAKER_2>And so, that's cool, that's great for Canada.

00:45:00.500 --> 00:45:17.740
<v SPEAKER_2>So, if I can get a deal where I'm gonna buy their submarines, and they're gonna give us some defence business in Canada, and they're gonna give us some automotive business in Canada, and they're gonna give us some other sector textiles business in Canada, I don't know, whatever it is, they're gonna give us a bunch of business in Canada across multiple sectors, that's great for the country.

00:45:17.740 --> 00:45:27.680
<v SPEAKER_2>I hope, and hopefully we can keep on this, don't let defence get washed out, like don't just say, okay, I'm gonna buy the military kit, and I'm gonna get all these other sectors, but not a defence reciprocation.

00:45:27.680 --> 00:45:38.860
<v SPEAKER_2>Like the whole point of us growing our defence industrial base will be to make sure that we do it for our own systems and through these exports, so that we've now got more Canadian industrial base to buy from in the future.

00:45:38.860 --> 00:45:51.560
<v SPEAKER_2>So you've got a whole, in ITB speak, strategic offsets, which is defence is a strategic sector in this conversation, make sure the defence stuff comes, and then it's great to add other sectors as well.

00:45:51.560 --> 00:45:56.780
<v SPEAKER_2>I can see people getting too enthusiastic too fast and forgetting, hang on, there's supposed to be a defence offset in here somewhere.

00:45:56.780 --> 00:45:58.700
<v SPEAKER_2>So we've got to hold on to that one.

00:45:58.700 --> 00:46:00.000
<v SPEAKER_2>But so far so good.

00:46:00.000 --> 00:46:01.740
<v SPEAKER_2>But there's definitely room to grow.

00:46:01.740 --> 00:46:08.300
<v SPEAKER_2>And I think some of the announcements that we've seen and will continue to see is, we're being creative straight out of the gate.

00:46:08.300 --> 00:46:12.720
<v SPEAKER_2>It's great, whereby it's not an offset from the company, it's an offset from the country.

00:46:12.720 --> 00:46:15.940
<v SPEAKER_2>And Canada has never played that game and we're playing it now, so that's cool.

00:46:17.100 --> 00:46:20.060
<v SPEAKER_1>Well, Mike, thanks very much for joining us on Defence Deconstructed.

00:46:20.060 --> 00:46:23.480
<v SPEAKER_1>Last question to you, we ask all of our guests, what do you read in these days?

00:46:23.480 --> 00:46:26.500
<v SPEAKER_2>These days, I'm just reading a lot of newspaper articles.

00:46:26.500 --> 00:46:28.700
<v SPEAKER_2>Honest to God, I am not having any time for books.

00:46:28.700 --> 00:46:37.780
<v SPEAKER_2>I spend a lot of my time keeping track of what's going on in the world of geopolitics, so that when my airplane lands, I have a sense of knowing what's going on in the world around me when I land.

00:46:37.780 --> 00:46:38.600
<v SPEAKER_1>I can commiserate.

00:46:38.600 --> 00:46:40.800
<v SPEAKER_1>Hey, Mike, thanks again for joining us on Defence Deconstructed.

00:46:40.840 --> 00:46:41.960
<v SPEAKER_2>Thank you.

00:46:44.040 --> 00:46:46.220
<v SPEAKER_1>Thanks for listening to the Defence Deconstructed.

00:46:46.220 --> 00:46:51.700
<v SPEAKER_1>For more of our work, go to cgai.ca or follow us on

LinkedIn, Twitter, Instagram, or Facebook.

00:46:51.700 --> 00:46:58.280
<v SPEAKER_1>If you like what we do and want to keep us going, think of donating to us at cgai.ca slash support.

00:46:58.280 --> 00:47:00.900
<v SPEAKER_1>Defence Deconstructed is brought to you by our team in Ottawa.

00:47:00.900 --> 00:47:04.540
<v SPEAKER_1>Music credits go to Drew Phillips, and this episode was produced by Jordyn Carroll.